generalized block diagram showing the implementation of a servo loop 5 to accomplish this task that also incorporates an optional solar light panel 6 to derive the requisite servo drive power.

[] A reference potentiometer generates an analog voltage of the vertical position of the radiator. This voltage is differentially compared to the output of a feedback potentiometer that is mechanically positioned by the servo motor. The servo drives the feedback potentiometer until its output voltage matches the reference voltage.

[0017] Minor lateral alignment displacements of the radiator do not result in severe attenuations since the associated intensity loss experienced by any specific fiber element is compensated by a gain in a diametrically opposed element.

Claims

[c1]

What is claimed is:

1. A microscope illuminator, comprising:

a shroud of optical fibers surrounding a centrally-located point source light radiator so configured as to efficiently intercept the spherical radiation pattern.

[c2]

2. The microscope illuminator of claim 1, further comprising:

a vertical positioning system;

said system capable of altering the relative vertical position between the radiator and the fiber optic shroud to achieve an attenuation control of the transferred energy without altering its spectral characteristics.

[c3]

3. The microscope illuminator of claim 2, further comprising:

a solar panel array;

said array positioned above and/or below the point source radiator;